The Use of ePortfolios to Support First Year Student's Metacognitive Thinking

Katie Sabourin  
St. John Fisher College, ksabourin@sjfc.edu

Barbara Lowe  
St. John Fisher College, blowe@sjfc.edu

James Bowman  
St. John Fisher College, jbowman@sjfc.edu

How has open access to Fisher Digital Publications benefited you?

Publication Information
Sabourin, Katie; Lowe, Barbara; and Bowman, James, "The Use of ePortfolios to Support First Year Student's Metacognitive Thinking" (2015). Educational Technology Publications. Paper 2.
https://fisherpub.sjfc.edu/edtech_pub/2

Please note that the Publication Information provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit http://libguides.sjfc.edu/citations.

This document is posted at https://fisherpub.sjfc.edu/edtech_pub/2 and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.
The Use of ePortfolios to Support First Year Student's Metacognitive Thinking

Abstract
Select freshman writing courses at St. John Fisher College are piloting the use of eportfolios in place of the traditional portfolios. The College has created templates that are designed so direct links between course work, goals, and student reflections are explicit. The intent of our study is to evaluate the differences in student’s reflective writing from a variety of freshman level writing courses, including both those using eportfolios and those using traditional paper portfolios. Using a rubric that evaluates student reflections on their understanding of purpose, significance, and relevancy, as well as the student’s overall performance, we will share the results on students’ metacognitive abilities to connect course work with program goals, academic, and personal interests. The use of eportfolios at the College is specifically designed with a holistic view of the student. Our student eportfolios include academic, non-academic, personal and career components and are used by students both as a requirement within courses and programs, as well as on a voluntary basis. This framework is key to the implementation of eportfolios for us, as it requires students to take ownership of their learning, promotes evaluation of their own skill development, as well as learn to write for a broad audience. In the presentation we will discuss: · A brief history and philosophy of eportfolios on our campus · A demonstration of our template infrastructure, including the connection with our courses, programs and college-wide learning goals · Findings from our research study described above · Implications for all eportfolio users on the use of reflection within ePortfolios to increase metacognitive skills of students

Keywords
fsc2015

Disciplines
Educational Methods | English Language and Literature | Online and Distance Education

Comments
Presented at The Association for Authentic, Experiential and Evidence-Based Learning (AAEEBL) Annual Conference in Boston, Massachusetts, July 8, 2015.
The Use of ePortfolios to Support First Year Student's Metacognitive Thinking

Barb Lowe, PhD
Associate Dean & Associate Professor, Philosophy
School of Arts & Sciences
St. John Fisher College

Jim Bowman, PhD
Associate Professor, English
School of Arts & Sciences
St. John Fisher College

Katie Sabourin, MS
Educational Technologist
Office of Academic Affairs
St. John Fisher College
About St. John Fisher College
• Located just outside of Rochester, NY
• ~4,000 total students
• Undergraduate, Graduate & Doctoral Programs

ePortfolio Use on Campus
• Grassroots use within courses and programs, not mandatory for all students
• Holistic approach to student learning experience
• Google Sites is the supported platform, with a series of templates provided to users
Overall reflection on college wide learning goals

**Career-oriented portion, updated continuously**

**General academic area, applies to all undergrad students**

**Specialized areas for participation programs**

Also provided in specialized templates for participating majors
The Core

Fisher's Core curriculum consists of 15 courses, which must be successfully completed to graduate.

The Core experience complements your other academic experiences by helping develop skills and perspectives that are enhanced and applied through study within your major.

The Core is comprised of two tiers of study: Foundations and Perspectives.

**Foundations**
1. Learning Community (LC)
2. Research-Based Writing (RW-199)
3. Cultural Contrasts (CC)
4. Scientific and Quantitative Literacy (SQ)

**Perspectives**
(P1) Perspectives on the Arts
(P2) Philosophical and Religious Perspectives
(P3) Sociocultural Perspectives
(P4) Exploration of the Natural and Technical World
(P5) Intercultural Perspectives and Languages

**Skills Across the Core**
1-Learning Community (LC)

In your Learning Community, faculty from two different academic disciplines teach two linked courses sharing a common theme, giving you the opportunity to learn about a topic from at least two perspectives. You'll explore topics of social importance both in discussions and in writing. Learning Communities target writing, discussion, research, and group work skills as the first step in improving your ability to succeed in college.

Insert Learning Community Title Here
Insert Learning Community course description here.

This Learning Community is made up of two courses:
- Insert Course 1 Title
- Insert Course 2 Title

1 - Self & Social Awareness

Students will increase their self-awareness via engagement in an important social issue(s) and reflection on where they place themselves regarding that issue.

Description of Artifact:

Reflection:

ADD FILES
First Year Program & Portfolios @ SJFC

Learning Community
• First semester freshman, two disciplinary different faculty and courses paired around common theme. Focus is on writing, reading, critical thinking through multiple perspectives, and information literacy.

Research-based Writing
• Second semester freshman course, writing intensive, with concentration on information literacy. Students develop competency in locating, evaluating, and analyzing resources. Students write a research-based paper, arguing a position in conversation with others, especially authors of scholarly articles, books, research, etc.

Portfolio Required for both Programs
Purpose of the Study

• This study will explore difference between student reflective writing when using an ePortfolio and a traditional paper portfolio during the freshman foundation writing courses. Using a rubric that evaluates student reflections on their understanding of purpose, significance and relevancy, researchers will evaluate the students’ metacognitive abilities to connect course work with program goals, academic and personal interests.

• Preliminary findings looking at Fall 2014 Learning Community courses only.
### Rubric for Assessing Student Reflections in ePortfolios

<table>
<thead>
<tr>
<th>Connections to Course (Understanding Purpose)</th>
<th>Highly Developed</th>
<th>Developed</th>
<th>Emerging</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student describes the artifact and explains why it satisfies the course assignment. Student clearly articulates the relationship between the assignment and a goal of the course. Student evaluates the success of his/her work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connections to Learning (Understanding Significance/Meaning)</th>
<th>Highly Developed</th>
<th>Developed</th>
<th>Emerging</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student identifies specific skills and/or knowledge learned in the course and explains how the skills and/or knowledge learned relate to the intent of the core curriculum and/or their academic major. Student clearly states the academic importance of the skill and/or content knowledge beyond the importance to the course alone.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connections to Career or Personal Interests (Understanding Relevancy)</th>
<th>Highly Developed</th>
<th>Developed</th>
<th>Emerging</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student identifies specific components of the artifact that relate to career objective, or personal interest. Student describes why the artifact is personally significant.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alignment of rubric with revised version of Bloom’s Taxonomy (Krathwohl & Anderson):**
- **Remembering & Understanding**
- **Understanding & Applying**
- **Evaluating & Analyzing**
<table>
<thead>
<tr>
<th></th>
<th>ePortfolio one faculty n=9</th>
<th>ePortfolio both faculty n=6</th>
<th>ePortfolio combined n=15</th>
<th>Paper Portfolio one faculty n=10</th>
<th>Paper Portfolio both faculty=6</th>
<th>Paper Portfolio combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections to Course</td>
<td>2.4</td>
<td>2.6</td>
<td>2.5</td>
<td>2.5</td>
<td>2.2</td>
<td>2.26</td>
</tr>
<tr>
<td>Connections to Learning</td>
<td>2.0</td>
<td>2.4</td>
<td>2.2</td>
<td>1.4</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Connections to Career or Personal Goals</td>
<td>2.0</td>
<td>2.3</td>
<td>2.1</td>
<td>.9</td>
<td>1.5</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ePortfolio one faculty</th>
<th>ePortfolio both faculty</th>
<th>ePortfolio combined</th>
<th>Paper Portfolio one faculty</th>
<th>Paper Portfolio both faculty</th>
<th>Paper Portfolio combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections to Course</td>
<td>16/18 89%</td>
<td>10/12 83%</td>
<td>26/30 87%</td>
<td>19/20 95%</td>
<td>9/12 75%</td>
<td>28/32 87%</td>
</tr>
<tr>
<td>Connections to Learning</td>
<td>15/18 83%</td>
<td>12/12 100%</td>
<td>27/30 90%</td>
<td>8/20 40%</td>
<td>9/12 75%</td>
<td>17/32 53%</td>
</tr>
<tr>
<td>Connections to Career or Personal Goals</td>
<td>11/18 61%</td>
<td>9/12 75%</td>
<td>20/30 67%</td>
<td>5/20 25%</td>
<td>4/12 33%</td>
<td>9/32 28%</td>
</tr>
</tbody>
</table>
Now that you have nearly completed this assignment, reflect on what you have gained, if anything, from the process (creating the portfolio and all its elements and completing the reflective memo). Do you see yourself using this portfolio in the same way in the coming months, years, etc.? If so, how?

**Student Reflections: Qualitative Analysis**

<table>
<thead>
<tr>
<th>Category</th>
<th>ePortfolio</th>
<th>Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful in Future</td>
<td>32%</td>
<td>5%</td>
</tr>
<tr>
<td>Benefit: Ability to See Progress</td>
<td>30%</td>
<td>11%</td>
</tr>
<tr>
<td>Benefit: Document Repository</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Benefit: As a Reference Tool</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Won’t Use It</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Benefit: Ability to See Progress

Paper Portfolio

• “Beneficial to see how my writing has progressed since September.”
• “I have truly been able to see how my writing (in my opinion) gets noticeably better throughout the portfolio.”
• The portfolio assignment has given me the ability to see how I have progressed through my first college semester.”
• “I realized my progress throughout the year.”

ePortfolio

• “I realize now that I did learn a lot of applicable skills inside and outside the classroom. The amount of work that was put into the creation spans the entire duration of the semester. It is the best tangible evidence of my growth as a student not only during the semester, but into the future as well.”
• “Creating the portfolio and the reflective memo has enabled me to reflect on my development throughout this semester and will make it possible for me to look back on this development as I continue my college career.”
• “I will also use this to further my academic career because it will allow me to see my progress as I continue my college journey.”
• “…it can show how my work has grown from freshman year to senior year and beyond. This can be important for future employers because it shows that I have grown even in just four short years.”

• Both sets of reflection indicate a growth mindset, but ePortfolio reflections also indicate a forward looking mindset to reach future goals.
• Similarly, the comments by the ePortfolio students suggest some higher-order thinking and analysis of the student’s own learning.
Overall Findings

- Both portfolios and ePortfolios contribute positively to students learning related to “Connections to the Course”.
- ePortfolio use is connected with additional growth learning in relation to “Connections to Learning” and “Connections to Career or Personal Goals”.
- Added growth connected with ePortfolios seems to be facilitated by the holistic format of the ePortfolio template.
- Student reflections within ePortfolios indicate a more forward looking attitude and mindset for assessing their progress and achieve long-term goals.
Implications & Future Research

- Results should be shared and warrant continued support for the use of ePortfolios in the First Year Program and beyond.
- Students at risk may benefit from creation of an ePortfolio as part of retention efforts.
- If the goal is to help students realize connections between course material and future career and personal goals then the ePortfolio format may be the better choice.
- Is metacognitive awareness greater for students offered opportunities for periodic reflection on learning compared to those students who are only prodded for reflection on learning at the end of the course, independent of portfolio platform?